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SOIL TREATMENT an aid in TERMITE CONTROL

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EXTENSION SERVICE
UNITED STATES DEPARTMENT
OF AGRICULTURE

SOIL TREATMENT

an Aid in TERM

The damage to buildings in our country caused by subterranean termites amounts to many millions of dollars annually. Although such losses are more prevalent in the South than in the North, termites are capable of causing structural damage in any State. Because of this, infestations should be checked wherever they are found.

TELLTALE SIGNS OF SUBTERRANEAN TERMITES are the earthen tunnels or runways built by these insects over the surfaces of foundation walls to reach the wood above. When feeding in wood, the pearly-white worker termites make galleries that follow the grain. These galleries seldom show on the wood surface, but may be found by removing weatherboarding or trim boards or by probing with an ice pick or a knife the places where one suspects the insects are at work. Termites do not push out sawdustlike material from their galleries.

Another sign of termites is the swarming of winged adults early in the spring or fall. Each adult has four silvery wings, which are of equal length and twice as long as the body. Numerous detached wings may be found where swarming has taken place, even after the swarm has disappeared.

THE HAZARD OF TERMITE INFESTATION is greatest beneath *basementless* buildings that are poorly drained and inadequately ventilated; and in houses *with basements,* in the parts of the foundation that are adjacent to enclosed porches, sun parlors, and terraces, where filled earth comes very

ITE CONTROL

close to the building timbers. This is likely to occur when timbers are inserted in adjacent walls or rest on them. In *basementless* buildings, the hazard is greater along the inside of the foundation. In buildings *with basements,* the opposite is apt to be true.

THE MAIN THING TO REMEMBER in attempting to control termites in a building is to break any contact between the termite colony in the soil and the woodwork. This can be done by blocking mechanically the passageways from soil to woodwork made by these insects, by poisoning the soil, or by using both these methods. Every case of termite trouble requires individual treatment. The suggestions given in this leaflet apply to some of the more simple soil treatments. Soil treatment provides a satisfactory remedy for 5 years or more, but is not a permanent preventive measure. Such treatment is most effective when the necessary changes in structure are made.

When more difficult treatments are needed, such as for areas beneath filled-in porches or when the drilling of masonry foundations is necessary, see the instructions in Farmers' Bulletin 1911.[1]

TO CONTROL INFESTATIONS occurring along *interior* walls or around supporting piers

[1] Preventing Damage to Buildings by Subterranean Termites and Their Control. U. S. Department of Agriculture Farmers' Bul. 1911. 40 pp., illus. Revised April 1949.

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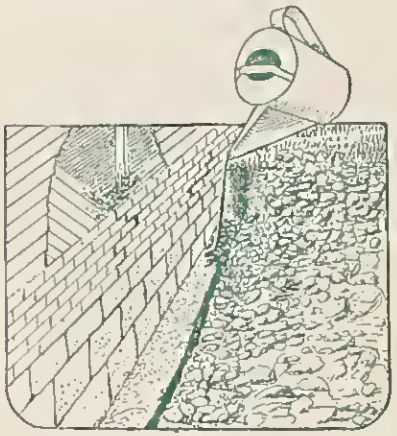
of a *basementless* building, dig a trench about 1 foot wide and about 8 inches deep along the wall or around the piers. This trench should be dug close enough to the basement wall or pier to expose its surface. The trench should never be extended below the footing, but along the wall it should be long enough to extend 4 or 5 feet in each direction from the termite runways. Along *exterior* walls of a *basementless* building, dig a trench about 15 inches deep.

When infestations occur along *exterior* foundation walls in buildings having *full basements*, the soil must be treated to a much greater depth to obtain control. This can be done either by digging the trench 30 inches deep, or by digging it 15 inches deep and then making 1-inch holes a foot apart along the bottom of the trench to an additional depth of 15 inches. These holes can be made easily with an auger, or with a rod or an iron pipe. When tubes or other signs of termites appear on the *basement* side of the foundation, locate the cracks or openings on the *exterior* side of the



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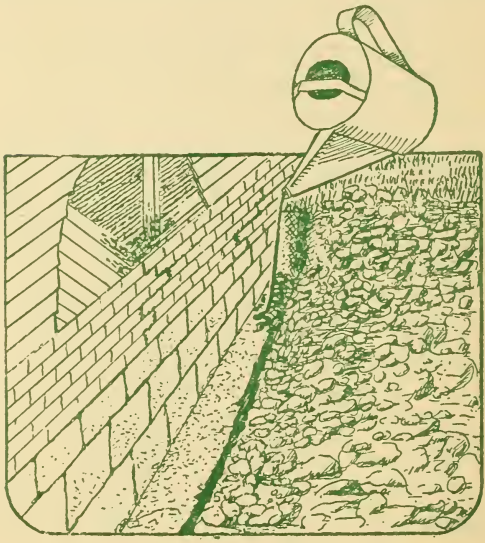

wall through which the termites have entered, and seal them with concrete, coal-tar pitch, or plastic cement. Do not use asphalt for this purpose because termites can go through it. If the tubes enter below the bottom of the trench on the outside, dig the trench deeper in that area in order to place the chemical as deep as the termites have worked and to seal all the opening effectively.

SODIUM ARSENITE, as a 10-percent solution in water, is one of the most effective soil poisons known for subterranean termite control. It is odorless, nonflammable, nonexplosive, and relatively cheap. It is available as a liquid concentrate or as a powder. One pound of the powder dissolved in a gallon of water will give the strength desired. This poison is used chiefly under partially excavated parts of buildings, where it is applied along the *interior* foundation walls and around piers.

DDT also is effective as a soil poison and can be purchased either as a liquid concentrate or as a wettable powder. To prepare the necessary 5-percent solution from the powder, dissolve 14 ounces of the 50-percent wettable powder in each gallon of No. 2 fuel or Diesel oil used. At summer temperatures the powder will require stirring for about 15 minutes to get it into solution. The undissolved particles that remain after thorough stirring can be disregarded, as they represent the inert filler.

PENTACHLOROPHENOL is another soil poison. It may be purchased as a 5-percent solution, which is the strength to use, or as a 1–10 concentrate. To each gallon of the concentrate add 10 gallons of No. 2 fuel (furnace) or Diesel oil. This makes the desired 5-percent solution.

In shallow trenches along foundation walls of *basementless* buildings use 2 gallons of sodium

arsenite solution, 4 gallons of DDT solution, or 5 gallons of pentachlorophenol solution for each 10 linear feet of trench. In deep trenches along *outside* foundation walls of buildings *with basements* use twice this dosage.

HOW TO APPLY CHEMICALS.—Along the *exterior* wall pour or sprinkle some of the chemical at the bottom of the trench. Cover with a layer of soil about 6 inches thick. Pour or sprinkle more of the chemical on top of this soil layer. Mix the chemical thoroughly with this layer. Tamp well. Continue to add more layers of soil, mix with chemical as before, and tamp until the trench is filled. Along the *interior* wall pour the chemical into the trench. This trench may be filled with soil treated as above, or left open. Don't apply chemicals to water-soaked or frozen soil.

CAUTION

The chemicals mentioned in this leaflet are poisonous to man and other warm-blooded animals and must be handled with care. They should not be permitted to come in contact with the skin. Wear rubberized gloves for protection. If the soil poison should come in contact with the body, wash the skin immediately with warm soapy water. When pentachlorophenol is being applied in an enclosed area, provision should be made for free circulation of air to prevent irritation of the nose and eyes. These chemicals should never be applied when there is danger that they may be leached from the soil and enter wells that supply drinking water.

These chemicals are also poisonous to plants. To protect shrubbery from the toxic effects of soil poisons other than sodium arsenite, line the sides of the trench next to the roots with a heavy roofing material or with sisal craft paper. Sodium arsenite is soluble in water and is likely to be taken up through the roots and kill the plants. Because of this it should not be used along the outside walls when it may endanger plants.

Pentachlorophenol and DDT solutions, being flammable, should be mixed outdoors. Children and pets should be kept away from areas where these poisons are being prepared and used.

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